Mastering Ansible

Jenkins Pipeline

accenture

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Exercise Steps

Scenario:

In this activity, we will cover how to run a playbook by integrating Ansible with Jenkins.

Prerequisite:

a. The source code is available in Gitlab. You can download it by using the URL :
   GitHub - vishnukiranreddy4/ansiblerepo

Walkthrough:

1. Install Ansible Plugin
2. Create a Pipeline Job in Jenkins
3. Configure the Job with Jenkinsfile and execute build

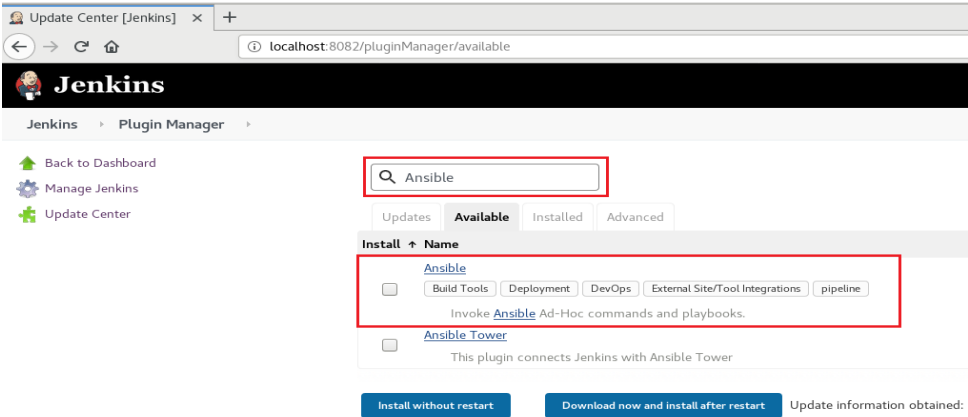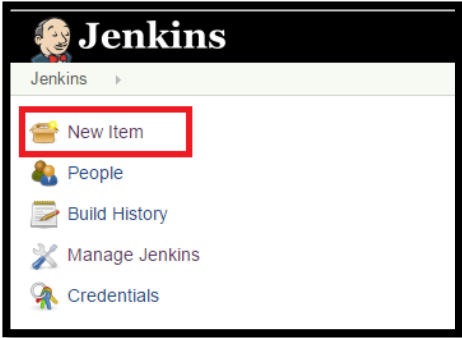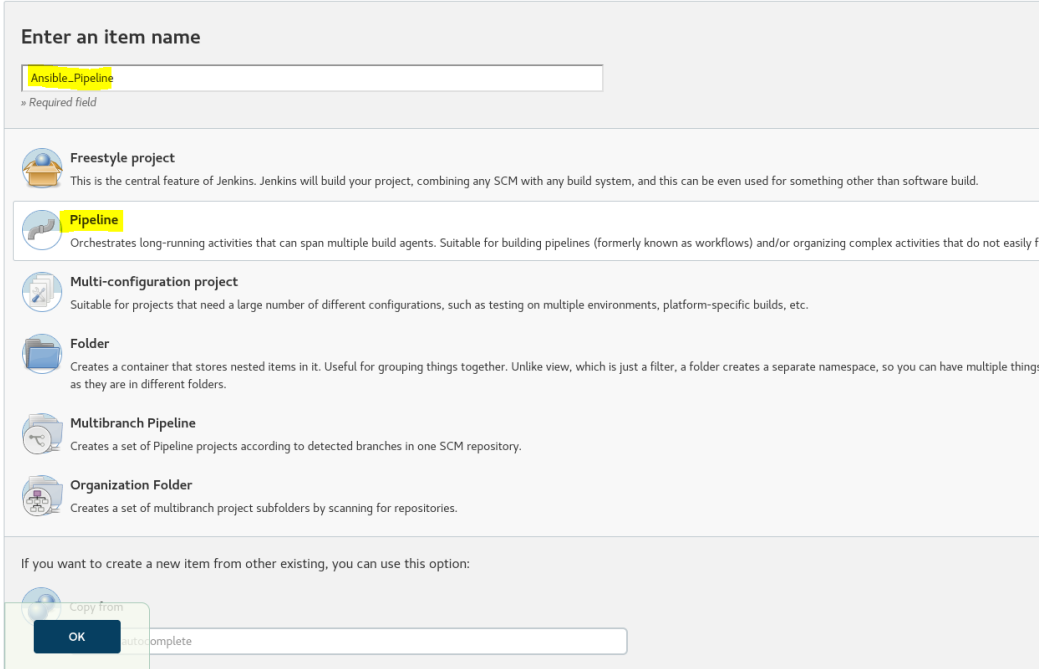| Activity 1	

1	Login to GitHub and fork the below project.
	https://github.com/vishnukiranreddy4/ansiblerepo.git
	
	Note: Once you fork the project update your repository URL in Jenkinsfile.txt of master branch.
	
	<pre>15 lines (15 sloc) 339 Bytes
	
	 1 pipeline {
	 2 agent any
	 3 stages {
	 4 stage('Get_Playbook') {
	 5 steps {
	 6 git 'https://github.com/vishnukiranreddy4/ansiblerepo.git'
	 7 }
	 8 }
	 9 stage('Run_Playbook') {
	10 steps {
	11 sh 'ansible-playbook playbook.yml'
	12 }
	13 }
	14 }
	15 }</pre>

2	Access Jenkins Dashboard using the URL **http://localhost:8080** Username: **admin** Password: **admin**
3	Go to **Manage Jenkins → Manage Plugins**

4	Click on **Available** tab as highlighted in the below image –
5	Search and install **Ansible** plugin as shown in the below image. After every plugin installation, click on **Install without restart** button –

6	Select **New Item** from the menu as highlighted in the below image:
7	a. Type the job name as '**Ansible_Pipeline**' in the **Enter an item name** field and select **Pipeline Project** as the project type as shown below: b. Click **OK** to create job. This action leads to the **Project Configuration** page, where you can configure settings for build activity.
8	To configure job with GitHub project, perform the following tasks: a. In the **Project Configuration page**, under the **General** tab, type the details in the **Description** field

9	In the **Project Configuration page**, navigate to **Pipeline** tab and select '**Pipeline script from SCM'** from Definition drop-down.
10	a. Select **Git** from **SCM** drop-down. b. Add **Repository URL** and credentials as shown below c. Check the **Lightweight checkout** box. **Note**: Jenkinsfile.txt is available in the repository.

Pipeline

Definition

Pipeline script from SCM

SCM ?

Git

Repositories ?

Repository URL ?

https://github.com/vishnukiranreddy4/ansiblerepo.git

Credentials ?

- none -

+ Add

Advanced...

Add Repository

Branches to build ?

Branch Specifier (blank for 'any') ?

*/master

Add Branch

Repository browser ?

(Auto)

Additional Behaviours

Add ▾

Script Path ?

Jenkinsfile.txt

	d. Click on **Save** to save the configurations.
1 1	Execute Build and View Build results Click on **Build Now** to execute the job. Dashboard › Ansible_Pipeline ▾ › 🔼 Back to Dashboard 🔍 Status 📝 Changes 🔄 Build Now ⚙️ Configure 🚫 Delete Pipeline 🔍 Full Stage View 📝 Rename ❓ Pipeline Syntax
1 2	Once the job is executed successfully, you can see the build status as shown below.

Stage View

	Declarative: Checkout SCM	Get_Playbook	Run_Playbook
Average stage times: (Average full run time: ~7s)	1s	1s	1s
#3 Sep 30 06:54 · No Changes	886ms	883ms	4s

1 3	a. To view build results, click the build number under **Build History** of the job in the Jenkins dashboard. b. Click **Console Output.** c. This page will show all stages are executed successfully. 🔺 Back to Project 🔍 Status 📝 Changes 🖥 Console Output 📝 Edit Build Information 🚫 Delete build '#1' ◆ Git Build Data Sample Console Output:

```
+ ansible-playbook playbook.yml

PLAY [all] ***********************************************************************

TASK [Gathering Facts] **********************************************************
ok: [172.32.6.144]

TASK [hostname] *****************************************************************
ok: [172.32.6.144] => {
    "ansible_hostname": "ip-172-32-6-144"
}

TASK [date and time] ************************************************************
ok: [172.32.6.144] => {
    "msg": [
        "Date: 2022-09-30",
        "Timezone: UTC",
        ""
    ]
}

TASK [network info] *************************************************************
ok: [172.32.6.144] => {
    "msg": [
        "All Interface List: [u'eth0', u'lo', u'docker0', u'virbr0-nic', u'virbr0'
        "All IP: [u'172.17.0.1', u'172.32.6.144', u'192.168.122.1']",
        "Gateway: 172.32.0.1",
        "Eth0 MAC: 02:ae:7c:b0:8f:30",
        ""
    ]
}
```

*** End of Activity Jenkins Pipeline ***